312
109

Parnell

1933

432,128 COMPLETE SPECIFICATION

1 SHEET

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

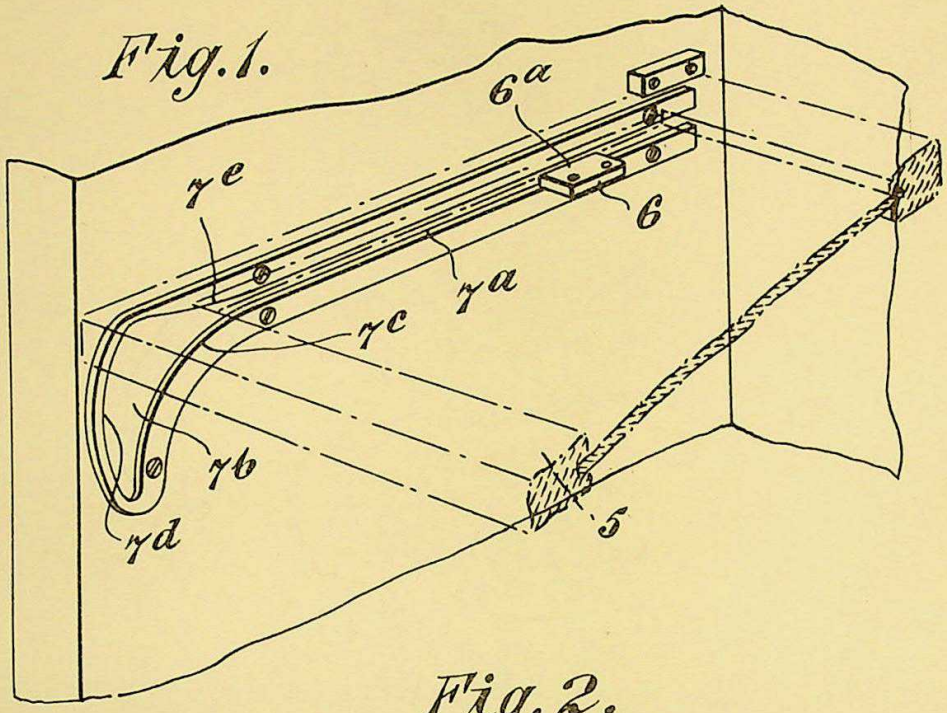



Fig. 2.

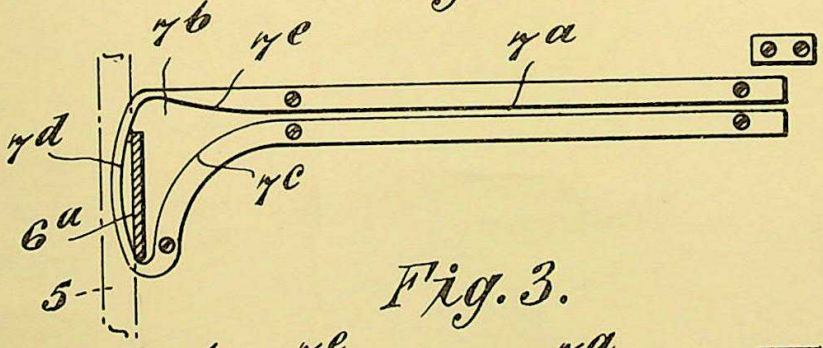



Fig. 3.

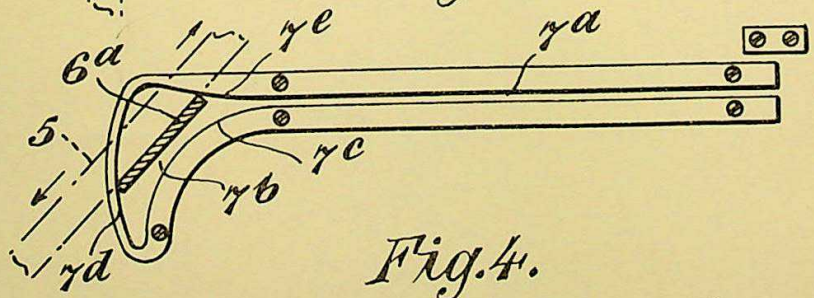
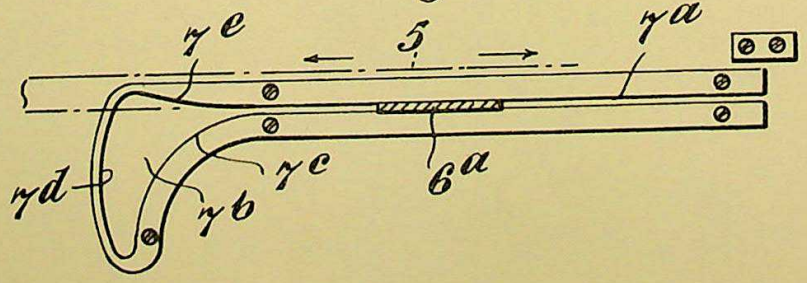



Fig. 4.

Malby & Sons, Photo-Lith

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EXAMINER'S COPY

Div. 8

# PATENT SPECIFICATION

Application Date: Jan. 27, 1934. No. 2824/34.

Complete Specification Left: Jan. 28, 1935.

Complete Specification Accepted: July 22, 1935.

432,128

PROVISIONAL SPECIFICATION

## Improvements relating to Doors or Flaps for Showcases, Bookcases and the like

We, GEORGE PARNALL & COMPANY LIMITED, of 4, Bedford Square, London, W.C.1, a Company incorporated under the Laws of Great Britain, and ALBERT EDWARD MURRAY, of the Company's address, a British Subject, do hereby declare the nature of this invention to be as follows:—

This invention has reference to improvements relating to doors or flaps for showcases, bookcases and the like, and is concerned particularly with doors or flaps for such articles of the kind in which the door or flap can be raised into a horizontal position and subsequently pushed or slid back into the case so as to admit of unimpeded access thereto such doors or flaps being referred to colloquially as disappearing doors.

With showcases, bookcases and the like provided with doors of the aforesaid kind as heretofore constructed considerable difficulty is frequently experienced in positioning the door so that it may be readily pushed and slid rearwardly into the case when required to be disposed out of sight, and the present invention has for its object the provision of an improved means whereby doors of the aforesaid kind are automatically positioned relatively to a guiding track during an opening movement so that they can be readily pushed into the case.

The invention consists of an improved means for guiding doors of the aforesaid kind for use with showcases, bookcases and the like, and comprises the provision on the side of the case of a guide or slotted portion provided adjacent to its forward end with cam tracks which co-operate with a projecting means carried by the door so as to lead the projecting means automatically into and out of the section of the guide track required to be occupied when the door is in a horizontal position.

The invention further resides in the details of construction of the improved guiding means for use in conjunction with the disappearing doors of showcases, bookcases and the like to be described hereinafter.

[*Price* 1/-]

A convenient embodiment of the invention will now be described in its application to a disappearing door for a showcase.

According to the said embodiment of the invention the side members of the door framing have affixed thereto intermediate the end plates the outer portions whereof project beyond the outer faces of the side members. These projecting portions are of substantially rectangular formation and co-operate with tracks which are formed of sheet metal screwed to the sides of the case. These tracks each comprise a horizontally disposed slotted section which at its forward end opens into an enlarged gapped section which is bounded at the rear by a downwardly curved edge which constitutes a cam track and at the front by an upstanding arcuate edge the upper end of which continues in a downwardly inclined edge which continues as the upper edge of the aforesaid horizontal slotted section. The aforesaid downwardly curved edge is continuous with the bottom edge of the horizontal slot and with the upstanding arcuate edge.

The operation of the invention is as follows:—

When the door is in the closed and hence vertically disposed position the lower edge of each plate rests in the junction between the downwardly curved cam surface and the upstanding cam surface with the upper edge of the plate bearing on the upstanding cam surface. When the door is raised for opening purposes the upper ends of the plates ride up the upstanding cam surfaces and down the inwardly inclined portions into which the upper end of the upstanding track merges, the lower ends of the plates ride up the downwardly curved cam surfaces thereby guiding the upper ends of the plates into the horizontal slots. The door may then be pushed into the disappearing position along the horizontal section of the track.

Similarly when the door is withdrawn from the disappearing or opened position the forward ends of the plates as they emerge from the horizontal section of the tracks bear on to the downwardly curved

cam surface and thus guide the plates into the junctions between the said downwardly curved cam surfaces and the upstanding cam surfaces.

Although in the embodiment of the invention described the guiding means attached to the door is in the form of projecting plates it will be understood that a pair of rollers or pegs may be substituted for each of the plates.

Dated this 26th day of January, 1934.
SHAW, BOWKER & FOLKES,
8, Waterloo Street, Birmingham, 2,
Chartered Patent Agents,
Agents for Applicants.

COMPLETE SPECIFICATION

## Improvements relating to Doors or Flaps for Showcases, Bookcases and the like

We, GEORGE PARNALL & COMPANY LIMITED, of 4, Bedford Square, London, W.C.1, a Company incorporated under the Laws of Great Britain, and ALBERT EDWARD MURRAY, of the Company's address, a British Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to improvements relating to doors or flaps for showcases, bookcases and the like, and is concerned particularly with doors or flaps for such articles of the kind in which the door or flap can be raised into a horizontal position and subsequently pushed or slid back into the case so as to admit of unimpeded access thereto such doors or flaps being referred to colloquially as disappearing doors.

With showcases, bookcases and the like provided with doors of the aforesaid kind as heretofore constructed considerable difficulty is frequently experienced in positioning the door so that it may be readily pushed and slid rearwardly into the case when required to be disposed out of sight, and the present invention has for its object the provision of an improved means whereby doors of the aforesaid kind are automatically positioned relatively to a guiding track during an opening movement so that they can be readily pushed into the case.

The invention consists of an improved means for guiding doors of the aforesaid kind for use with showcases, bookcases and the like comprising a guiding means having a horizontally disposed slotted section which at its forward end opens into an enlarged gapped section which is bounded at the rear by a downwardly curved edge which is a continuation of the bottom edge of the horizontally disposed section and which edge in turn continues at the front in an upstanding arcuate edge the upper end of which continues in a downwardly inclined edge which continues unbroken as the upper edge of the aforesaid horizontally disposed section and a projecting means carried by the door which co-operates with the aforesaid curved edges at spaced points thereon to lead the projecting means on the door automatically into and out of the horizontally disposed slotted section when the door is being moved into either the open or closed position the aforesaid edges constituting a continuous and unbroken guiding means.

The invention will now be described with particular reference to the accompanying sheet of drawings which illustrate the invention in its application to a disappearing door for a showcase.

In the drawings:—

Figure 1 is a perspective view of sufficient of a showcase as is necessary to an understanding of the invention showing the door pushed within the showcase and

Figures 2, 3 and 4 are views illustrating the relationship between the projecting means on the door and the guide or slotted portions during the various stages of the operations of pushing the door within the case or withdrawing it to the closing position.

The side members of the door framing 5 have affixed thereto intermediate the ends plates 6 the outer portions $6^a$ whereof project beyond the outer faces of the side members of the framing 5. These projecting portions $6^a$ are of substantially rectangular formation and co-operate with tracks which are formed of sheet metal screwed to the sides of the case. These tracks each comprise a horizontally disposed slotted section $7^a$ which at its forward end opens into an enlarged gapped section $7^b$ which is bounded at the rear by a downwardly curved edge $7^c$ which constitutes a cam track and at the front by an upstanding arcuate edge $7^d$ the upper end of which continues in a downwardly inclined edge $7^e$ which continues as the

upper edge of the aforesaid horizontal slotted section $7^a$. The aforesaid downwardly curved edge $7^c$ is continuous with the bottom edge of the horizontal slotted section $7^a$ and with the upstanding arcuate edge $7^d$.

The operation of the invention is as follows:—

When the door is in the closed and hence vertically disposed position the lower edge of the projecting portion $6^a$ of each plate 6 rests in the junction between the respective downwardly curved edge $7^c$ and the upstanding arcuate edge $7^d$ with the upper edge of the projecting portion $6^a$ of each plate 6 bearing on the respective upstanding arcuate edge $7^d$. When the door is raised for opening purposes the upper ends of the projecting portions $6^a$ of the plates 6 ride up the upstanding arcuate edges $7^d$ and down the inwardly inclined edges $7^c$ into which the upper end of the upstanding arcuate edges merge, while the lower ends of the projecting portions $6^a$ of the plates 6 ride up the downwardly curved edges $7^c$ and thereby guide the upper ends of the projecting portions $6^a$ of the plates 6 into the horizontal slotted sections $7^a$. The door is then pushed into the disappearing position along the horizontal slotted sections $7^a$ of the track.

Similarly when the door is withdrawn from the disappearing or opened position the forward ends of the projecting portions $6^a$ of the plates 6 as they emerge from the horizontal slotted sections $7^a$ of the tracks bear on to the downwardly curved edges $7^c$ and thus guide the projecting portions $6^a$ of the plates 6 into the junctions between the said downwardly curved edges $7^c$ and the upstanding arcuate edges $7^d$.

Although in the embodiment of the invention described the guiding means attached to the door is in the form of projecting portions $6^a$ of the plates 6 it will be understood that a pair of rollers or pegs may be substituted for each of the plates 6.

We are aware of the prior British Patent Specifications Nos. 215,589, 233,822 and 391,892 and we make no claim to anything described or claimed therein.

The present invention is differentiated from the prior art in that the guiding means claimed enables the use on the door of either projecting plates or pairs of rollers or pegs as the complimentary guiding means carried by the door, which plates or pegs during the initial opening and final closing movements are continuously in contact with the curved front and upper parts of the guide at spaced points.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Means for guiding doors of the aforesaid kind for use with showcases, bookcases and the like comprising a guiding means having a horizontally disposed slotted section which at its forward end opens into an enlarged gapped section which is bounded at the rear by a downwardly curved edge which is a continuation of the bottom edge of the horizontally disposed section and which edge in turn continues at the front in an upstanding arcuate edge the upper end of which continues in a downwardly inclined edge which continues unbroken as the upper edge of the aforesaid horizontally disposed section and a projecting means carried by the door which co-operates with the aforesaid curved edges at spaced points thereon to lead the projecting means on the door automatically into and out of the horizontally disposed slotted section when the door is being moved into either the open or closed position the aforesaid edges constituting a continuous and unbroken guiding means.

2. Means for guiding doors of the aforesaid kind for use with showcases, bookcases and the like comprising sheet metal guide tracks adapted to be secured to the sides of the case and having horizontally slotted sections which at their forward ends open into enlarged gapped sections which are bounded at the rear by downwardly curved edges which are continuations of the lower edges of the horizontally slotted sections and which in turn continue in upstanding arcuate edges the upper ends of which continue unbroken in downwardly inclined edges which in turn continue as the upper edges of the aforesaid horizontally disposed slotted sections and plates adapted to be secured to the door framing and having outwardly projecting portions which co-operate with the aforesaid curved edges at spaced points thereon so that the plates are guided automatically into and out of the horizontally disposed sections according as to whether the door is being moved out of or being brought into the closed position the aforesaid edges constituting a continuous and unbroken guiding means.

3. Means for guiding doors of the aforesaid kind for use with showcases, bookcases and the like constructed, arranged and adapted for use substantially as hereinbefore described with reference to the accompanying sheets of drawings.

Dated this 26th day of January, 1935.

SHAW, BOWKER & FOLKES,
8, Waterloo Street, Birmingham, 2,
Chartered Patent Agents,
Agents for Applicants.

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